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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,577	01/29/2004	Uwe-Jens Krabbenhoft	HK-794	6185

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LERNER GREENBERG STEMER LLP  
P O BOX 2480  
HOLLYWOOD, FL 33022-2480

EXAMINER
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WASHINGTON, JAMARES

ART UNIT	PAPER NUMBER
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2625

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06/22/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/767,577	KRABBENHOFT, UWE-JENS
	<b>Examiner</b>	<b>Art Unit</b>
	Jamares Washington	2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) Responsive to communication(s) filed on 02 May 2007.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) Claim(s) 1-5 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-5 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 29 January 2004 is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

*Response to Amendment*

1. Applicant's amendment and response received on May 2, 2007 have been entered.

Claims 1-5 are currently pending; claim 1 amended. Applicant's amendments and arguments are addressed hereinbelow.

*Response to Arguments*

2. Applicant's arguments with respect to claims 1-5 have been considered but are moot in view of the new grounds of rejection.

*Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who

has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by Kiyotaka Nakabayashi et al (US 6912306 B1).

Regarding claim 1, Nakabayashi discloses a method of transforming color values of a first device-dependent color space into color values of a second device-dependent color space, to effect a substantially identical visual impression of colors reproduced in the first and second color spaces (“The object of the invention is to provide an image-processing apparatus and an image-processing method which process image data so that the images represented by the data and reproduced by different devices may look almost identical in terms of color” at column 1 line 43), the method which comprises:

providing a first color profile characterizing the first color space (“Using an input-side device profile, the converter 21 converts the RGB value to an XYZ value” at column 3 line 47) and providing a second color profile characterizing the second color space (“The output-side converter 25 converts the XYZ value to a CMY value (or a CMYK value) that the printer 3 will use to print the image, by using the output-side device profile” at column 4 line 54);

wherein the first and second color profiles specify an association between the color values of the first and second device-dependent color spaces and the color values of a device-independent color space (“The input-side device profile is a file that contains conversion formula or a conversion table for converting the RGB value received from the image display 2, to a XYZ value based on the human visual sense” at column 3 line 50 “The output-side device profile is a file that contains conversion formula or a conversion table for converting the XYZ value based

on the human visual sense to a CMY value, which the printer 3 will use to print the image” at column 4 line 57);

wherein a white point of the first device-dependent color space, a white point of the second device-dependent color space, and a white point of the device-independent color space are described by device-independent white point values (“To convert the XYZ value received from the input-side converter 21, the input-side observation environment changing circuit 22 receives, from the first input-side sensor 12, the detection signal representing the reflectance and the like of the screen of the image display 2. The circuit 22 also receives, from the second input-side sensor 13, the detection signal representing the ambient light L<sub>sub.2</sub> that exists at the time of observing the image displayed by the image display 2. From these detection signals the circuit 22 obtains the parameters concerning the environment in which the image displayed by the image display 2 is observed. Using the parameters, the circuit 22 performs a conversion process based on the chromatic adaptation model and a conversion process for making it possible to use the XYZ value in the device optimal color space” at column 4 line 4);

determining relative color values of the device-independent color space from the color values of the first device-dependent color space by way of the association specified in the first color profile (Fig. 4 RGB to XYZ – process based on input-side device profile);

converting the relative color values into absolute color values (in a ratio corresponding to a ratio of the values of the white point of the first device-dependent color space and the white point of the device-independent color space (Fig. 4 RGB to XYZ – process based on input-side device profile. “...in the conversion process performed by the input-side observation environment changing circuit 22, the parameters concerning the environment in which the image

is observed are obtained from the reflectance and the like of the screen of the image display 2..." at column 6 line 24. Equations 1-1 and 1-2 described in column 6 line 60 thru column 7 line 19.)

determining chromatically adapted color values from the absolute color values by way of a chromatic adaptation transformation (Fig. 4 XYZ to  $L_s M_s S_s$  to  $X_{op} Y_{op} Z_{op}$ ), the chromatic adaptation transformation includes converting the absolute color values into receptor signals L, M, S of color receptors by use of matrix multiplication ("To convert the tri stimulus value (XYZ value) to a cone signal (LMS value), the most appropriate matrix formula is selected from among the above-mentioned formulae in accordance with the characteristics and the like of the image" at column 8 line 12);

converting the chromatically adapted color values into relative chromatically adapted color values in a ratio corresponding to a ratio of the values of the white point of the device-independent color space and the white point of the second device-dependent color-space ("...the circuit 24 subjects the  $L_s M_s S_s$  value to a conversion process based on the chromatic adaptation model, thus converting the  $L_s M_s S_s$  value to an XYZ value" at column 5 line 30);

and determining color values of the second device-dependent color space from the relative chromatically adapted color values by way of the association specified in the second color profile ("...the output-side converter 25 converts the XYZ value to a CMY value" at column 5 line 33 and Fig. 4 XYZ to CMY Conversion based on output-side profile).

Regarding claim 2, discloses the method as rejected in claim 1, which comprises carrying out the chromatic adaptation transformation by way of a Bradford matrix ("...the tristimulus value (i.e., XYZ value) is converted to a cone signal (LMS value). This conversion process uses

a matrix. The matrix formulae that can be applied to the conversion process are as follows...Bradford Conversion Eq. (1-6)" at column 7 line 47).

Regarding claim 3, discloses the method as rejected in claim 1, which comprises carrying out the chromatic adaptation transformation in accordance with a Von Kries matrix ("To cope with the changes in the sensitivity of the cones, the chromatic adaptation is corrected on the basis of the Von Kries adaptation model" at column 8 line 32).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kiyotaka Nakabayashi et al (US 6912306 B1) in combination with Kim Jin-Seo et al ("Development of Color Management System Prototype" IEEE, 1998.

Regarding claim 4, Nakabayashi discloses the method as rejected in claim 1 comprising the use of color profiles.

Nakabayashi fails to teach color profiles formatted in accordance with the ICC specification.

However, Jin-Seo et al teaches, in the same field of endeavor of matching color perception in different environments (“...color management system that can help computers to correct color information between different color image devices” at page 1 column 1 under “Preface” line 20), teaches color profiles formatted in accordance with the ICC specification (“ICC (International Color Consortium) is currently working for establishing a worldwide profile standard. And our lab is one of the ICC members” at page 2 column 2 under “Standardization of Device Profiles” line 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use ICC color profiles as taught by Jin-Seo et al as the profiles used by Nakabayashi to obtain “consistencies between devices. It is very important to use the standard device profile [to obtain these consistencies].” (Jin-Seo, page 2 column 2 line 2).

Regarding claim 5, the Nakabayashi-Jin-Seo combination above discloses the method as rejected in claim 4.

The combination fails to teach leaving unchanged the associations contained in the color profiles between the color values of the device-dependent color space and the color values of the device-independent color space.

However, Jin-Seo et al further teaches the above limitation (“Furthermore, we develop new tags for scanner and monitor which are not in the current ICC profiles. When users select one of the profiles, a dialog box shows the information of the profile...” at page 3 column 1 under “Profile Editor” line 6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the profile editing feature of saving relative profile matches as taught by Jin-Seo in the method of using ICC color profiles as disclosed by the Nakabayashi-Jin-Seo combination to enable users to “change the parameters so that the output image matches the original one” (at page 3 column 2 line 3, Jin-Seo).

*Conclusion*

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2625

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jamares Washington whose telephone number is (571) 270-1585. The examiner can normally be reached on Monday thru Friday: 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Aung Moe can be reached on (571) 272-7314. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jamares Washington  
Junior Examiner  
Art Unit 2625

June 12, 2007

JW

AUNG S. MOE  
SUPERVISORY PATENT EXAMINER

6/18/07